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AMESBURY CITY CLERK

## **PLANNING BOARD DECISION**

*Property Ownership:* **City of Amesbury  
62 Friend Street, Amesbury MA 01913**

*Applicant:* **Amesbury Soccer Association  
PO Box 127, Amesbury MA 01913**

*Application Type:* **SITE PLAN REVIEW**

*Project:* **Outdoor Recreational Soccer Fields**

*Location:* **219 Lions Mouth Road, Amesbury, MA 01913**

*Date:* **October 26, 2015**

### **A. GENERAL**

On or about 03/27/2015, the Amesbury Planning Board (the "Board") received an application for Site Plan Review for proposed Recreational Soccer Fields ("Project") at Woodsom Farm, 219 Lions Mouth Road Amesbury MA. The application was submitted along with a Site Plan (the "Plan") drawn by Oak Consulting Group, LLC, PO Box 1123, Newburyport, MA 01950 on 03/05/2015 and last revised on 07/27/2015. The application and supporting documents were submitted by Margaret McCarthy on behalf of Amesbury Soccer Association (ASA, the "Applicant"). The set of plans includes six (6) sheets.

On or about 03/27/2015, the Amesbury Planning Board (the "Board") also received an application for Special Permit to allow Earth Removal and Filling associated with the Project. The Applicant formally requested via letter dated 10/05/2015 an extension of the public hearing

on the special permit application to March 30, 2016. The Board has tabled the discussion on that application until supplemental information is provided by the Applicant. The Board also received supplemental plans and documents pertaining to stormwater and drainage, erosion control, soil management and turf management for review (see Exhibits). The following documents are attached as exhibits:

- Exhibit 1 – Project Narrative – 3/27/2015
- Exhibit 2 – Draft Turf Management Plan - June 2015
- Exhibit 3 – Construction Logistics and Soil Management Plan – 8/3/2015
- Exhibit - Approved Plan Set (Sheets 1 – 6)

The Board held the initial public hearing on 4/27/2015 and subsequent continued public hearings on 6/8/15, 7/13/15 and 7/27/15. The public hearing was closed on 8/24/15 and a decision was rendered on 10/26/2015.

This is the Final Action of the Board (“Decision”) on the application for Site Plan Review.

#### **B. FINDINGS:**

1. **Project Site:** The Subject Property is located at 219 Lions Mouth Road and comprises of 344 acres per Assessor's Office records. The proposed Project is located on ten (10) acres of the total parcel area.
2. **Existing Conditions:** Currently the site is undeveloped and used as public outdoor recreational and open space. ASA currently uses another portion of the Woodsom Farms recreational area for its soccer operations.
3. **Project Description and Proposed Use:** Amesbury Soccer Association (ASA) has signed a lease with the City of Amesbury to use a portion of Woodsom Farm recreational area. It is proposing the construction of natural turf soccer fields on a portion of Woodsom Farm. The Plan will allow for the consolidation of the area currently used by ASA and create a more versatile and flexible field layout to help ASA in its mission. The fields will be properly drained and irrigated with the use of a proposed well at the site. ASA will maintain

the improved fields. Maintenance will be expanded to include seeding, irrigation and aeration, along with field management and rotation. A detailed project narrative is attached here as Exhibit 1. Some of the proposed implementation strategies may have to be revised pursuant to final approval and earth removal and fill special permit requirements;

4. **Off – Street Parking, Traffic and Vehicular Circulation:** No additional parking spaces are being proposed. The existing gravel public parking area will be used by the patrons. ASA will work with the Amesbury Police Department as needed to manage traffic during special events. No changes are proposed to the access easement area over the current driveway from Lions Mouth Road;
5. **Storm water Management:** The Board reviewed the proposed stormwater management system. A detailed Operation and Maintenance Plan has been presented. The applicant and their assignees will be required to follow the maintenance requirements to ensure proper functioning of the drainage structures. The Board finds that these design measures and maintenance requirements will reduce the likelihood of any detrimental impact on abutters due to stormwater runoff provided it is constructed as shown on approved plans;
6. **Environmental Resource Protection:** The Applicant has received an Order of Conditions from the Amesbury Conservation Commission for the proposed project. The Board finds that no additional assessment is needed for compliance with local environmental regulations;
7. **Signage** – No signage has been presented for the proposed recreational fields. No scoreboards or similar structures are proposed;
8. **Lighting:** No lighting has been proposed. There are no night time activities proposed or conducted by ASA.

Based on the findings noted in 1 through 8 above, the Board finds that the Project satisfies the Development and Performance Standards under Section XI.C.8 and the Site Plan Review Criteria under Section XI.C of the Amesbury Zoning Bylaw (the "Bylaw").

### **C. APPROVAL OF THE SITE PLAN AND CONDITIONS THERETO**

Upon notice and after a public hearing in accordance with the statute (General Laws, Chapter 40A, section 11) and the Amesbury Zoning Bylaw, and after full consideration of the evidence presented, and upon the findings made in Section B of this Decision, the Board grants a conditional Site Plan Approval for the proposed Recreational Soccer Fields located at 219 Lions Mouth Road in Amesbury as shown on the approved Plan, further upon the conditions and hereinafter set forth, for the premises described in the application.

### **I. COMPLIANCE WITH LOCAL, STATE AND FEDERAL REQUIREMENTS:**

The Project and all construction, utilities, roads, drainage, earth removal and filling and all related appurtenances with respect to the Project, shall comply with all applicable local, state and federal regulations except as waived specifically by this Decision. The Applicant shall be responsible for acquiring all other local, state and federal permits and approvals as necessary to construct the Project as approved by the Board. Final action on all other permits shall be submitted to the Board for record. The Board notes that the following are some of the permits needed for this Project prior to start of any construction activity:

1. Compliance with the Massachusetts Wetlands Protection Act and related regulations, G. L. c. 131, § 40-40A, and the Amesbury Wetlands Ordinance and Regulations;
2. Compliance with DEP Stormwater Regulations, as needed; and
3. NPDES permit from Environmental Protection Agency,

### **II. PRIOR TO START OF ANY CONSTRUCTION ACTIVITY ON SITE**

The Applicant shall file with the Board and all other relevant public agencies for review and for consistency with this Decision any documents and shall have completed the following actions:

1. **Earth Removal and Fill Special Permit:** The Applicant shall provide supplemental information pursuant to the requirements of the earth removal and fill provisions of the Amesbury Zoning Bylaw. Upon final action by the Board, the Applicant shall submit a copy of the recorded approval of Special Permit for Earth Removal and Fill;
2. **Final Documents:** This approval is subject to a review and final approval of a revised Turf Management plan and the review of final construction sequence plan;
3. **Legal Documents:** The following documents shall be submitted to the Board and the Building Inspector:
  - a) **Documents Recorded at the Southern Essex Registry of Deeds:**
    - i. Planning Board Decision and Plan Set - A copy of this Decision and endorsed Approved Plan Set; and
    - ii. Planning Board Decision - Special Permits for Earth Removal and Fill
4. **CAD Drawings** - Three copies of all drawings and site plans as approved by Board shall be provided as Computer Assisted Drawings (CAD) on Compact Disks to the Board;
5. **Applicant's Acknowledgement:** The Applicant shall submit acknowledgement of their responsibilities to maintain the stormwater system, adequate pedestrian and vehicular access to the facility. The City shall not be responsible for maintenance, repairs or replacement of any improvements made pursuant to this site plan unless specifically allowed in the terms of the lease agreement;
6. **Sedimentation and Erosion Control Bond** – The Applicant shall be required to post Surety with the Board for Sedimentation and Erosion Control in the amount and form determined by the Board to ensure that stormwater runoff management and erosion control measures are implemented on site as per Final Plans and other engineering drawings and to ensure that remedial actions can be taken to address any detrimental impacts from erosion and sedimentation during construction and until the stormwater management system is fully operational;

7. **Performance Bond:** The Applicant shall be required to post a surety with the Board to ensure that all site stormwater systems and other improvements are installed and completed as shown on the Final Plans. Prior to release of any Surety, the Board shall verify with its construction observation consultant that the work has been completed as per approved plans. The form and amount of surety shall be subject to final approval by the Board;
8. **Pre-Construction Conference** - At least five (5) business days prior to any initial site work, a Pre-Construction conference shall be held with the Applicant, Applicant's contractor, a representative of the Board, its consulting engineer, and representatives of the City Departments having an interest in the Plan. Said meeting shall be for the purpose of familiarization with the project, the conditions of approval, and the project's construction sequence and timetable; and
9. **Request for Pre-construction Conference:** The request for a Pre-construction Conference shall be acted upon by the Board only AFTER the Board has received and reviewed ALL of the documents required per this Decision before start of construction and has determined that the Project is ready to proceed to the construction phase. Upon authorization by the Board, its representatives shall schedule the Pre-construction Conference.

### **III. DURING CONSTRUCTION**

The following shall apply to all construction activity as per approved Site Plan:

1. **Stockpiles** - All earth stockpiles shall be established in locations as approved by the ACC or at a distance no less than fifty (50') feet from the edge of flagged wetlands boundary, whichever is greater. Earth material stockpiles shall not be allowed immediately adjacent to perimeter siltation barriers or drain inlets. Long term stockpiles over 30 days shall be shaped stabilized and circled by siltation fence and haybales and shall be stabilized by temporary seeding, sheeting or netting;

2. **Erosion Control and Stormwater Maintenance Requirement:** The Applicant's designee or assignee shall on a quarterly basis submit interim reports and supporting documents to the Board showing that requirements for stormwater system maintenance are being adhered according to the approved SWPPP.

#### **IV. PRIOR TO MAKING REQUEST FOR AN OCCUPANCY PERMIT**

The Applicant shall file with the Board and all other relevant public agencies for review and for consistency with this Decision any documents and shall have completed the following actions:

1. **Certification of Improvements** - The Applicant shall request the Board for a Certificate of Improvements and submit it to the Building Inspector from the Board verifying that conditions of approval have been met and that construction to date is per the approved plans;
2. **As-Built Plans and Repairs** - To ensure compliance with the terms and conditions of this Decision and any approval or order by any federal, state-agency, the Applicant shall submit plans with a certification from a Professional Engineer or Architect registered in the Commonwealth of Massachusetts that the Project "As-Built Plan" complies in all substantive respects with this Decision and any other approval or order by any federal, state or local agency. Any damage to public roads and walkways shall be repaired and/or replaced to the satisfaction of the DPW Director and City Engineer;

#### **V. GENERAL AND IN PERPETUITY CONDITONS**

1. **Ground Lease:** This permit and allowed uses shall be subject to the terms and conditions of the lease agreement with the City of Amesbury. A copy of the signed lease agreement shall be submitted to the Board for record;
2. **Permanent Structures:** No permanent structure shall be installed on the site without prior approval by the Board;

3. **Applicable Permits:** The plan shall be subject to any and all other permits and conditions thereof, including non-local permits as applicable. No determination of compliance has been made by this Board with regards to permits outside their jurisdiction;
4. **Inspections** - The Planning Board shall require the inspection of drainage, stormwater management structures, and other site improvements to ensure that the work is carried out in accordance with the Final Plans and to ensure that all improvements are in compliance with the conditions stated in this Decision. The Board shall require the establishment of a construction observation account and the Applicant shall provide the funds necessary for inspection by the Board's consultant prior to start of any construction activity;
5. **Release of the Sedimentation and Erosion Control Bond:** Prior to release of any Surety, the Board shall verify with its construction observation consultant that the soils and slopes have stabilized and that there is evidence of healthy mature grass growing on final grades and fields that have been completed, and that all planting materials have survived two (2) growing season. Partial releases shall be allowed in amounts not less than fifty percent (50%) of the total initial surety bond amount held by the Board;
6. **Final Release of the Performance Bond** - Final release of performance bond shall be made when all the following conditions have been met:
  - a) Upon completion of work as shown on the Final Plans, the Applicant shall furnish a report from the Board's construction observation consultant indicating that all work has been completed as per the Board's Decision and as shown on the Final Plans;
  - b) All City Department and the Board's inspectional engineer have recommended release of bond funds; and
  - c) upon completion of all off-site improvements and stormwater management system, submission of an "As-Built Plan" to the Board along with a written confirmation from a Registered Professional Engineer (P.E.), indicating that construction complies with the approved site plans and conditions of approval, including drainage and utility plans;

7. **Post Construction Stormwater Maintenance:** There are several storm water management structures that need particular attention and maintenance needs initially. The operator of the stormwater management system shall submit post construction monitoring and maintenance logs and reports for a period of two (2) years after issuance of Certificate of Improvements or completion of all site improvements, whichever is later;
8. **Site Plan Modifications:** Prior to expansion, addition or alteration of uses allowed by this Site Plan Approval, the Applicant shall provide detailed information and plans along with a formal written request for modification to the approved Site Plan for determination of minor or major modification and approval by the Board. Any substantial modifications to the approved Site Plan or changes that impact the Performance Standards under XI.C.8 or conditions of approval of this Decision shall be subject to review and approval of the Board. The Board shall, if it so determines, require the applicant to submit a new application for modification to the approved Site Plan and hold a new public hearing for review of the requested modifications; and Any change in the limit of work, relocation or addition of fields, shall require a new public hearing
9. **Validity:** This permit shall remain valid only in conjunction with the terms of validity of special permit required under the earth removal and fill bylaw and other environmental permits as applicable. Any use that has not begun before the expiry of the term of lease shall not be allowed under this permit.

***Chair, Amesbury Planning Board***

Amesbury Planning Board

**TO:**

Amesbury Soccer Association

C/o Margaret McCarthy

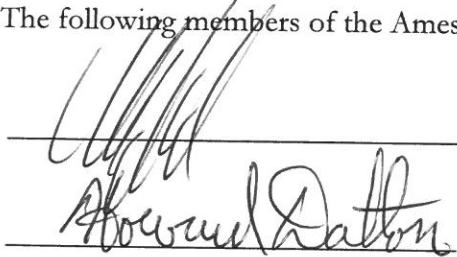
PO Box 127

Amesbury MA 01913

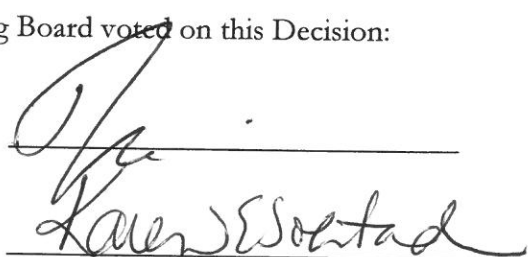
**PLANNING BOARD VOTE:**

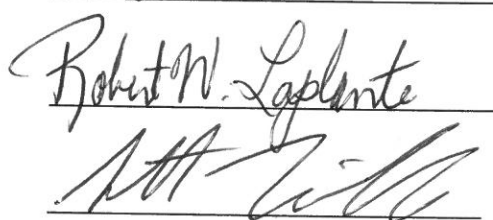
On 10/26/15, the Amesbury Planning Board voted all in favor of the approval of the Site Plan, as amended, for the proposed Recreational Soccer Fields by Amesbury Soccer Association at 219 Lions Mouth Road in Amesbury MA subject to the findings, waivers and conditions noted in this Decision.

The following members of the Amesbury Planning Board voted on this Decision:

  
Howard Dalton

  
Robert W. Laplante

  
Karen E. Soetad

  
Matt Will

Filed with the City Clerk on 12/29/15

  
Bonnie Kitchin  
City Clerk

A Building Permit is required for any construction or remodeling. It is your responsibility to file a Special Permit Decision with the Registry of Deeds and to record the plans after endorsement; forms may be obtained from the City Clerk's Office.

*Any appeal shall be made pursuant to Mass. General Laws, Section 17, Chapter 40A, and shall be filed within twenty (20) days after the date of filing of such notice in the City Clerk's Office.*

Site Plan Approval  
ASA – Woodsom Farm Soccer Fields  
219 Lions Mouth Road, Amesbury, MA 01913

**EXHIBITS:**

All plans prepared for Amesbury Soccer Association, PO Box 127 Amesbury MA 01913  
Prepared by: Oak Consulting Group, LLC, PO Box 1123, Newburyport, MA 01950

Sheet: C-1 Date:03/05/15; Last Revised: 06/02/15	<b>Existing Conditions/Site Preparation Plan</b> Woodsom Farm Soccer Fields
Sheet: C-2 Date:03/05/15; Last Revised: 06/02/15	<b>Site Layout Plan</b> Woodsom Farm Soccer Fields
Sheet: C-3 Date:03/05/15; Last Revised: 07/27/15	<b>Grading Drainage and Erosion control Plan</b> Woodsom Farm Soccer Fields
Sheet: C-4 Date:03/05/15; Last Revised: 06/02/15	<b>Irrigation Plan</b> Woodsom Farm Soccer Fields
Sheet: C-5 Date:03/05/15; Last Revised: 06/02/15	<b>Erosion Control Notes</b> Woodsom Farm Soccer Fields
Sheet: C-6 Date:03/05/15; Last Revised: 06/02/15	<b>Site Details</b> Woodsom Farm Soccer Fields





# WOODSON FARM SOCCER FIELDS

AMESBURY SOCCER ASSOC.  
P.O. BOX 107  
AMESBURY, MASSACHUSETTS

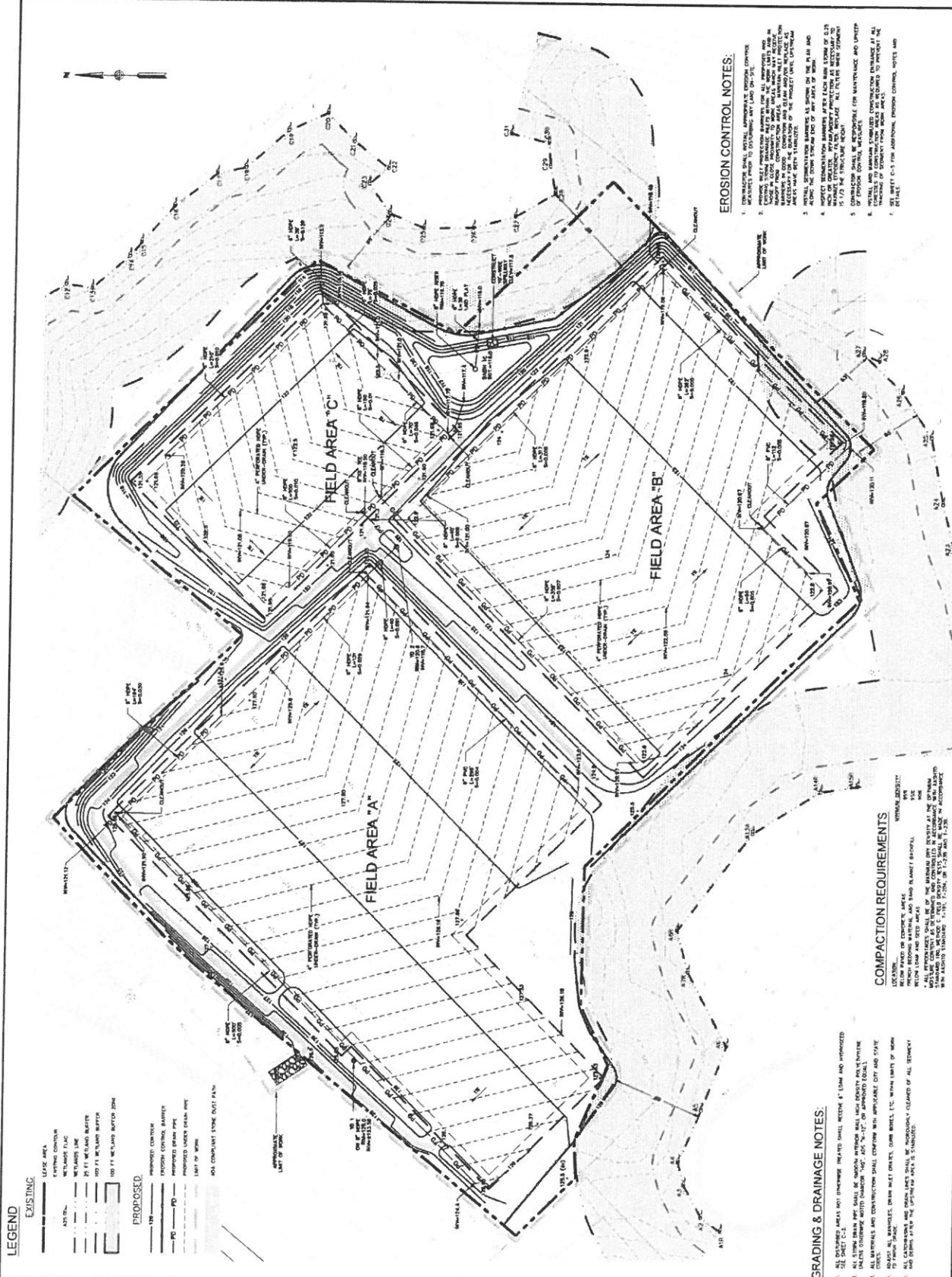


7-27-14  
SCALE = 1"=40'  
1"=40'

**OCG**  
Oak Consulting Group  
1000 Washington Ave. Suite 100  
Boston, MA 02111  
Tel: 617.552.1100

## GRADING DRAINAGE AND EROSION CONTROL PLAN

4	BSC Review (Comments)	7/27/15
3	Preparer (Original)	5/27/15
2	On-Site Inspection	3/5/15
1	Revised Per Comment	1/13/15
0	Prepared/Issue	Date
Drawn by: PFA		Scale: STD
Checked by: PFA		Scale: STD
Project: 140228		Date: JANUARY 5, 2015
Sheet: C-3		



### LEGEND

EXISTING	
---	EXISTING AREA
---	EXISTING DRAINAGE
---	EXISTING EROSION CONTROL
---	EXISTING FENCE
---	EXISTING LOT
---	EXISTING ROAD
---	EXISTING UTILITY
---	EXISTING WETLAND BUFFER
---	EXISTING 100 FT WETLAND BUFFER ZONE
PROPOSED	
---	PROPOSED AREA
---	PROPOSED DRAINAGE
---	PROPOSED EROSION CONTROL
---	PROPOSED FENCE
---	PROPOSED LOT
---	PROPOSED ROAD
---	PROPOSED UTILITY
---	PROPOSED WETLAND BUFFER
---	PROPOSED 100 FT WETLAND BUFFER ZONE

### GRADING & DRAINAGE NOTES:

- ALL EXISTING AREAS NOT OTHERWISE NOTED SHALL REMAIN AS SHOWN AND UNCHANGED.
- ALL EXISTING DRAINAGE SHALL BE MAINTAINED AND NOT REMOVED OR REDUCED IN CAPACITY.
- ALL EXISTING EROSION CONTROL SHALL BE MAINTAINED AND NOT REMOVED OR REDUCED IN CAPACITY.
- ALL EXISTING FENCES SHALL BE MAINTAINED AND NOT REMOVED OR REDUCED IN CAPACITY.
- ALL EXISTING LOTS SHALL BE MAINTAINED AND NOT REMOVED OR REDUCED IN CAPACITY.
- ALL EXISTING ROADS SHALL BE MAINTAINED AND NOT REMOVED OR REDUCED IN CAPACITY.
- ALL EXISTING UTILITIES SHALL BE MAINTAINED AND NOT REMOVED OR REDUCED IN CAPACITY.
- ALL EXISTING WETLAND BUFFERS SHALL BE MAINTAINED AND NOT REMOVED OR REDUCED IN CAPACITY.
- ALL EXISTING 100 FT WETLAND BUFFER ZONES SHALL BE MAINTAINED AND NOT REMOVED OR REDUCED IN CAPACITY.

### COMPACTION REQUIREMENTS

LOCK STATE  
RECORD DRAWING OR EXISTING AREA  
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### EROSION CONTROL NOTES:

- ALL EXISTING AREAS NOT OTHERWISE NOTED SHALL REMAIN AS SHOWN AND UNCHANGED.
- ALL EXISTING DRAINAGE SHALL BE MAINTAINED AND NOT REMOVED OR REDUCED IN CAPACITY.
- ALL EXISTING EROSION CONTROL SHALL BE MAINTAINED AND NOT REMOVED OR REDUCED IN CAPACITY.
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- ALL EXISTING WETLAND BUFFERS SHALL BE MAINTAINED AND NOT REMOVED OR REDUCED IN CAPACITY.
- ALL EXISTING 100 FT WETLAND BUFFER ZONES SHALL BE MAINTAINED AND NOT REMOVED OR REDUCED IN CAPACITY.

# WOODSOM FARM SOCCER FIELDS

AMESBURY SOCCER ASSOC.  
AMESBURY, MASSACHUSETTS

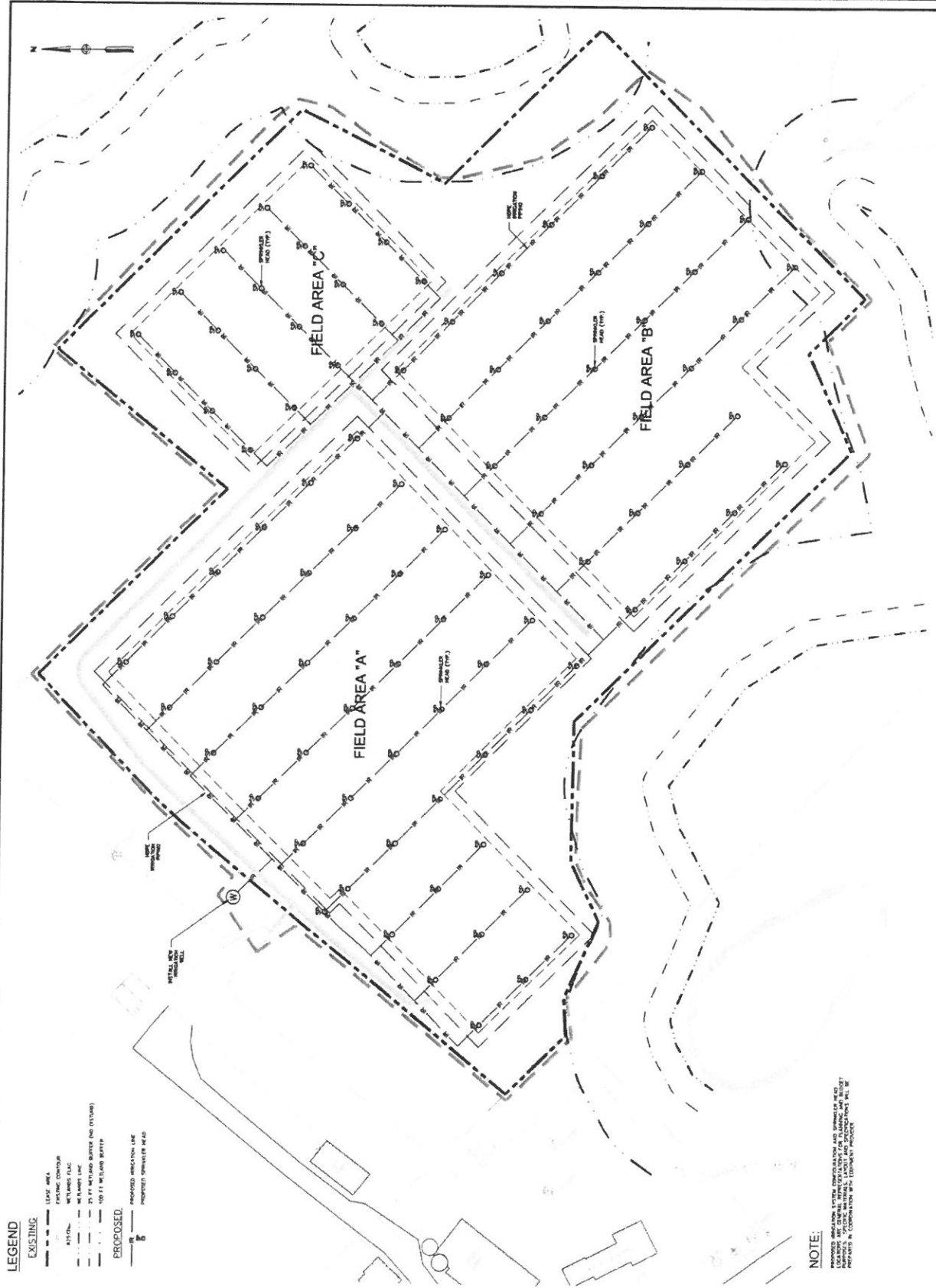


SCALE: 1/4" = 1'-0"

**OCG**  
Oak Consulting Group  
P.O. Box 1117  
AMESBURY, MA 01820  
PHONE: 978.253.1117

## IRRIGATION PLAN

				6/2/15
				3/2/15
				1/13/15
				Date
3	Revised Irrigation Well		Checked by	SPG
2	On-Site Irrigation Well			
1	Revised Per Comment			
	Revised/Issue			
No.				
Prepared by	PFA		Checked by	
Drawn by	PFA			
Scale			Date	JANUARY 5, 2015
Sheet	14028			







**PROJECT NARRATIVE**  
**For**  
**Planning Board Submittal**  
**Amesbury Soccer Association Soccer Fields**  
**At Woodsom Farm**  
**219 Lions Mouth Road**  
**Amesbury**  
**March 27, 2015**

**Overview:**

In the fall of 2014 Amesbury Soccer Association (ASA), entered into a Lease Agreement with the City of Amesbury for a portion of Woodsom Farm. The Amesbury Soccer Association is proposing to construct natural turf soccer fields within this leased area in order to relocate and consolidate the soccer fields currently used by ASA to a single, safe, properly pitched and drained designated area in the northeast corner of the farm. The consolidation will allow the placement of several properly-sized youth soccer fields, which will be properly drained, and irrigated with the use of a new well.

**Current Site Conditions**

The project site (Lease Area) consists of an approximately 10.1-acre portion of the Woodsom Farm property, 354 acres, and is currently occupied by maintained agricultural fields and existing natural turf soccer fields. The lease area is bounded by an existing baseball field complex to the east, a common parking area to the west, and wetlands protection areas to the south and north, refer to sheet C-1 Existing Conditions. There are no shrubs or trees within the Lease Area. The area slopes off to the north, east, and south away from the Lease Area.

The consolidation of fields would reduce the overall number of areas utilized for soccer and reduce the number of current abutting residences from four to one.

**Zoning**

Woodsom Farm is zoned OSC - Open Space Conservancy. According to Amesbury Zoning Bylaw 2012 private/nonprofit recreational facilities in OSC require special permit from the Planning Board.

**Proposed Project:****Proposed Improvements**

In order to accommodate current program usage, separate areas have been designated for U6 (also used for U8), U10, U12 and full size field, which have been sized in accordance with U.S. Youth Soccer recommendation, and are shown in Sheet C-2. It will be necessary to "rest" portions of the fields during certain seasons so the layout has been designed to accommodate alternative configurations which will likely include rotating the field orientation by 90 degrees. As such, the design proposes three general field areas designed as Areas A, B and C on the project plans.

The field construction will include installation of underdrains to promote proper drainage of the playing surfaces. An irrigation system is also proposed which, in conjunction with the underdrains, will help increase the durability for the fields and ease long term maintenance burdens. The plans show a proposed well although we may end up utilizing the City water

system, which would be connected through the parking lot, outside jurisdictional areas and their buffer zones.

### Soccer Field Dimensions

Field dimensions for youth and adult soccer are pre-determined by the various governing bodies of the sport. In most cases a dimensional range is specified by these organizations, and the field sizes shown on the plan are compliant with the guidelines and recommendations.

FIFA (the international governing body of the sport of football / soccer): Specifies the overall dimensions for full size fields in "The Laws of the Game", under Law 1, "The Field of Play". The dimensions are given as "Length (touch line): minimum 90 m (100 yards), maximum 120 m (130 yards). Width (goal line): minimum 45 m (50 yards), maximum 90 m (100 yards)."

US Soccer Federation (governing body of the sport in the United States): The USSF adheres to FIFA standards governing the field of play.

US Youth Soccer: This national organization is the primary source for recommendations and guidelines concerning youth players, game rules, etc. Their recommendations for youth soccer fields are covered in the Table 1-1 and Table 1-2.

**Table 1-1: US Youth Soccer Recommended Soccer Field Sizes**

**US Youth Soccer Recommended Goal/Field/Ball Sizes and Match Format/Duration**

AGE GROUP	GOAL SIZE [in feet]	FIELD WIDTH Min.   Max. [in yards]	FIELD LENGTH Min.   Max. [in yards]	BALL SIZE	MATCH FORMAT	MATCH DURATION [in minutes]
U6	6' x 18' (or smaller)	15   25	20   30	3	3 vs. 3 No goalkeepers	4 x 6-8'
U8	6' x 18' (or smaller)	20   30	25   35	3	4 vs. 4 No goalkeepers	4 x 12'
U10	6' x 18'	35   45	45   60	4	6 vs. 6	2 x 25'
U12	6' x 18'	45   55	70   80	4	8 vs. 8	2 x 30'
U14	8' x 24'	50   100	100   130	5	11 vs. 11	2 x 35'
U16	8' x 24'	50   100	100   130	5	11 vs. 11	2 x 40'
U19	8' x 24'	50   100	100   130	5	11 vs. 11	2 x 45'

**Table 1-2: ECYSA Recommended Soccer Field Sizes**

## ECYSA Fact Sheet

Revised Spring 2013

	U10	U12	U14	U16	U18	U19
<b>Players:</b>						
Max on Field	6	8	11	11	11	11
Minimum on Field	5	6	7	7	7	7
Max on Team - MTOC 1 & 2	12	15	18	24*	24*	24*
Max on Team - County 1 & 2	14	15	20	24*	24*	24*
Minimum Suggested on Team Size	10	12	13	13	13	13
<b>Playing Field:</b> <span style="float: right;">* see ECYSA Rules 1.A.13</span>						
Max Dimensions (yards)	45 x 60	55 x 80	100 x 130	100 x 130	100 x 130	100 x 130
Minimum Dimensions (yards)	35 x 45	45 x 70	50 x 100	50 x 100	50 x 100	50 x 100
Center Circle: Radius (yards)	8	8	10	10	10	10
Penalty Area (yards)	14 yd line	14 x 34	18 x 44	18 x 44	18 x 44	18 x 44
Penalty Kick Spot from Goal Line (yards)	NO PK's	10	12	12	12	12
Penalty Arc is from the PK Spot (yards)	N/A	8	10	10	10	10
Goal Area Size (yards)	6 x 18	6 x 18	6 x 20	6 x 20	6 x 20	6 x 20
Coaches Technical Area Size (yards)	3 x 10	3 x 10	3 x 10	3 x 10	3 x 10	3 x 10
Coaches Technical Area from Midfield (yards)	5	5	5	5	5	5
Coaches Technical Area from Touchline (yards)	1	1	1	1	1	1
Goal Size - Max	6 x 18 ft	6 x 18 ft	8 x 24 ft	8 x 24 ft	8 x 24 ft	8 x 24 ft
Goal Size - Recommended (min Goal Size)	6 x 12 ft	6 x 18 ft	8 x 24 ft	8 x 24 ft	8 x 24 ft	8 x 24 ft

Essex County Youth Soccer Association: ECYSA's published guidelines

### Fields Construction

The initial steps of construction will be to install temporary environmental and safety features, erosion control and safety fencing. Once the site is secure and meets environmental regulatory requirements, excavation and grading will begin.

Construction will involve both cutting and filling in order to provide for flat, usable field space. The earthwork quantities included estimated imported fill and topsoil exported are outlined in the attached memo from Oak Consulting Group dated February 6, 2015.

After rough grading with fill and cut as shown on the plans is complete the drainage BMPS and irrigation infrastructure will be installed, refer to Sheet C-3 and C-4. This will include the installation of an on-site irrigation well.

At this time, power will be brought in from Lion's Mouth Road to the well pump and irrigation control box. A narrow trench will need to be cut adjacent to the paved entrance driveway to install the electrical power conduit, and the area will be repaired to its current state once completed.

The playing surfaces will need to be accurately graded to no more than 1% slope to achieve proper drainage. This "crowning" of the fields is typically done with the high point at the center of a playing field. However, the field areas will be rotated frequently, so a consistent 1% slope may be desired across each of the tiered areas.

After the irrigation system is complete and tested, the entire area will either be seeded or planted with sod to achieve a high quality playing surface. Seeding the field will be a less expensive

option, but will delay use of the fields for up to a year.

A 6-foot wide ADA compliant stone dust path way is proposed for access from the parking area to the fields, as shown on Sheet C-2.

Project phasing may occur, working on one field area at a time, in which case the above general sequence will be followed for each phase.

### **Site Entrance, Parking and General Accessibility**

The main entrance to the current playing field area is located on the north side of Lion's Mouth Road adjacent to the original Woodsom farmstead. This unmarked, paved driveway runs northeast for approximately 500 feet leading to a compacted dirt and gravel parking area. Currently this shared and unmarked parking area can accommodate between 40 and 60 vehicles, and is also used to park farm vehicles during haying season. The paved driveway provides drop off and turnaround space as well as access to a dirt road which runs to the northeast area of the parcel. The dirt road is used by dog walkers, youth groups (for model rocketry, Boy Scouts outings, etc), horseback riders and bicyclists.

During the Spring and Fall seasons parking is only required for two simultaneous games at most, and parking capacity has not been an issue. A heavier parking load occurs during the "Kickin' It!" sessions, and some attendees will park across Lion's Mouth Road in the field adjacent to the roadway when the dirt lot is filled. ASA posts "No Parking" signage along the driveway adjacent to the Woodsom residence when heavy lot usage is expected. For Summer Recreational soccer league games on Saturdays, ASA directs all of its participants to park across Lion's Mouth Road in the grass field, with an exception given to coaches with equipment and handicapped people. This arrangement allows dog walkers and other park visitors access to normal parking in the dirt lot during ASA Summer games.

The parking area is in generally good condition, although ASA has occasionally requested that ruts be filled in by the City DPW. ASA does not intend to provide improvements to the existing parking area as it is outside of the Lease Area.

ASA does not intend to add significantly to its list of programs or events. Currently, there have not been any reported issues with traffic congestion or safety issues associated with the program, and parking capacity issues are rarely encountered. ASA still intends to post "No Parking" signage along the driveway adjacent to the Woodsom farmstead during periods of heavy use. In the future if a special event is planned ASA will coordinate with the City departments including Amesbury Police to ensure all appropriate precautions are taken to ensure the safety of all participants and motorists.

### **Support Facilities, Utilities and Amenities**

Except for the proposed irrigation lines, there are no fresh water or wastewater lines to the

proposed field area, nor are there any designated bathroom facilities available within close proximity. There are no facility options other than two portable toilets (i.e., Port-a-Potties) currently provided and paid for by ASA. These facilities are open for use to all park visitors as ASA does not restrict their use during off hours.

#### Site Lighting and Power

No site lighting is proposed. ASA concludes program use of the fields by dark. A power line will be required for the operation of the automatic irrigation system and well pump. And this will need to be run from Lion's Mouth Road to a location near the entrance to the field area.

#### Concessions

There are no existing or proposed concessions buildings on the site. ASA currently uses an enclosed trailer to sell refreshments during the summer recreation league games on Saturday mornings. Electrical power to the trailer's freezer is provided by Ashley Woodsom through a use agreement where ASA runs a single 110v extension cord from his garage to the trailer across the driveway. It is ASA's intent to utilize the new power line mentioned in the previous section to provide electricity to the trailer during hours of operation.

#### Equipment Storage

There is a small garage or shed located on the site along the paved driveway that was historically used to store farm equipment. Through an informal use agreement with the City, ASA uses approximately 400 square feet of the 1,200 square foot structure to store nets, portable goal frames, balls and other program equipment. Within the last few years, ASA had a new garage door installed to replace the existing badly worn and weathered overhead door. This was done with the City's permission.

To the best of our knowledge, the remainder of the building is used by the Amesbury Police Department to store unclaimed bicycles.

#### Team and Spectator Seating

There are no existing accommodations for team or spectator seating, nor are there any plans to provide this amenity. Currently, spectators stand or bring their own portable seating, as do the players. This is a fairly common arrangement for youth soccer facilities in the region.

#### Trash and Recycling

ASA distributes several trash and recycling receptacles around the various fields during events and periods of frequent use – primarily on weekends. Volunteers then collect the receptacles at the conclusion of events. In the past, ASA has left one or two receptacles at the remote areas of the fields for general use, but more often than not these are quickly filled with dog waste. Once trash is removed it is placed into the small on-site trash dumpster, which ASA leases on an

annual basis. ASA then arranges periodic removal with the hauler. For recycling, ASA places containers at Lion's Mouth Road for bi-weekly pick up. It is ASA's intent to maintain this arrangement.

#### Emergency Vehicle Access

Emergency vehicles have access to the three current field area from entry points located at the parking lot. To access the proposed field area, ASA recommends establishing a clearly identified access lane with signage or other visual elements to prevent park visitors from blocking the gate area. Currently, the "gate" is simply an opening in the existing fencing.

#### Scoreboards and Other Structures

No scoreboards or other structures are present on the site, nor are any proposed.

#### Field Entrance and Signage

ASA will seek to have plantings donated for location at this area to help identify the entrance.

Presently, there are no permanent signage elements at the site. ASA proposes an identifying sign for the entrance area to the field area from the parking area. Also, incidental signage identifying the emergency vehicle access lane and use restrictions would be located at this entry point.

#### **Project Permits:**

In addition to this submittal for a special permit to construct recreational facilities and import fill a Notice of Intent was submitted to the Conservation Commission on March 16, 2015.

#### **Maintenance:**

The proposed soccer field area will be maintained in good condition based on the maintenance program as described below.

**Mowing:** Mowing will be performed as needed during the playing seasons. Frequency will vary according to seasonal growth rate, weather and program demands. Generally, mowing will occur weekly during the late Spring and early Summer, with a target grass height of between 2" and 2 ½". Less frequent mowing will occur in the mid to late Summer to prevent over drying of the top layer of soil and ensuing damage to grass playing surface.

*Average expected mowing frequency: weekly*

**Irrigation:** Athletic fields in New England will go dormant in hot weather if there is no supplemental irrigation. Fields can stay in a dormant state for several weeks and recover adequately. However, playability on dormant fields is reduced and potential wear injury is increased. Frequency of irrigation will be dependent on weather conditions, with the goal to irrigate only when the grass shows signs of wilting and discoloration because of lack of water. Irrigation equipment will need to be adjusted to apply water only as fast as the soil will absorb it.

Periodically, a soil sampling probe will be used to determine the rate and depth of moisture penetration. Sprinklers should be operated until water has penetrated to a depth of at least 6 inches. Periodic aerations will speed up water penetration and usually results in more efficient water use.

Timing of irrigation for the fields will be monitored and adjusted according to playing frequency, weather, and recent rainfall. The goal will be to avoid overwatering, as the result will be potentially as damaging as under-watering due to soggy playing conditions leading to compacted soil.

*Average expected irrigation frequency: as required based on monitoring of surface conditions*

**Over seeding:** As part of the maintenance program, the entire field area should be over seeded once in early May and again in September. Over seeding also can and should be performed at any point during the growing season in locations which exhibit poor growth or wear such as in goal areas and sidelines. If the goalmouth areas exhibit critically poor turf conditions during the playing season, thick sod replacement would be considered as an alternative to over seeding.

*Expected over seeding Frequency: twice annually*

**Soil Aeration:** Depending on the intensity of use, it can be expected that each of the natural turf fields will need aeration to reduce compaction. The first operation should occur in late May, following the Spring season, and the second in November following the Fall season. Methods of reducing compaction will vary based on the nature of the compaction. Compaction on newly established fields is generally limited to the top 2-3" and can be alleviated using hollow core or thin tine aeration methods. In-season aeration will be considered based on wear patterns and field rotation.

*Expected aeration frequency: twice annually*

**Fertilization:** The maintenance fertilizer program should be based on complete soil test results. Required amounts of phosphate and/or potash vary greatly with the natural soil fertility, establishment fertilization, and previous maintenance fertilization. Most athletic areas will require two complete fertilizer applications per year although some soil fields may require only one complete fertilizer application supplemented with one or more nitrogen applications.

*Expected fertilization frequency: twice annually, dependent on soil testing*



June 15, 2015

Amesbury Planning Board  
Amesbury Conservation Commission  
Office of Community and Economic Development  
62 Friend Street  
Amesbury MA 01913

Dear Planning Board and Conservation Commission Members:

This letter is to provide additional information requested by the City to support Amesbury Soccer Associations (ASA)'s Site Plan/Special Permit and Notice of Intent submissions, DEP File No 002-1116.

1. ASA is submitting a draft Turf Management Plan, attached to this letter. A final plan will be submitted prior to the final construction of the fields once the final seed mixture has been selected. The Plan will be reviewed and updated on a regular basis, as outlined in the document, and submitted to the City as necessary.
2. ASA is planning to work closely with abutting property owner on Lions Mouth Road to address concerns over parking. The proposed consolidation of the fields moves the playing area further away from the abutter and closer to Cashman Elementary school. The center of the field area is 0.25 miles from Cashman and the existing gravel parking area at Woodsom Farm. As the field are equi-distant from the two possible parking areas Cashman will be a viable alternative parking location. ASA plans to promote parking at Cashman Elementary School on our website, on the leagues website and by talking with our parents and coaches. In addition, we will continue to utilize cones and signs at Woodsom Farm to indicate approved parking areas. Cashman Elementary School parking can accommodate up to 180 cars. At our peak field usage we have had to accommodate 100 cars.
3. The proposed irrigation well has been relocated, refer to revised plan C-4. The well will be a bedrock well, with yield of approximately 30 gallons per minute and is anticipated to be 25-50' feet. The well will not have an impacted on surrounding surface water in the area and is not located near the City of Amesbury's water supply, as shown in the attached map.
4. A Construction Logistics and Soil Management Plan has been prepared by our representative, Oak Consulting Group LLC, and is attached.

We look forward to addressing any questions you have on the scheduled our response at the scheduled meetings in July at which our representatives Hughes Environmental Consulting and Oak Consulting Group will be present. In the meantime if you have any questions please contact me.

Sincerely,  
*Margaret McCarthy*  
Margaret McCarthy  
Secretary  
Amesbury Soccer Association  
978-317-8101  
[margaretmccarthy14@gmail.com](mailto:margaretmccarthy14@gmail.com)



## **Turf Management Plan**



## **Amesbury Soccer Association** **Turf Management Plan**

Amesbury Soccer Association (ASA) has developed this Turf Management Plan for maintaining soccer fields at Woodsom Farm. This document shall be reviewed and updated, if necessary, on an annual basis based on the results of soil testing. The update document shall be submitted to the City of Amesbury, for review prior to implementation.

This document was developed following the best management practices outlined in Turf Management for Municipal Athletic Fields, developed by Massachusetts Department of Agricultural Resources Turf Management for Municipal Athletic Fields. It is included in Appendix A for this document.

### **Surface Care and Maintenance**

The most important element to minimize adverse effects to the environment and enhance playing surfaces needed for the sport of soccer is to apply proper horticultural practices to establish and maintain healthy turfgrass. Choosing the appropriate cultural practices, such as proper turf for the site and use, proper fertilization, aeration, irrigation and mowing practices will reduce or eliminate the need for chemical treatment of the turf. Well-maintained healthy turf with dense root systems can suppress the growth of weeds and the potential for disease, thus reducing the need for pesticides. ASA is committed to providing the best possible quality playing field and minimizing the use of chemical treatments.

In order to maintain a healthy turfgrass system the following practices will be followed by ASA:

#### **Conduct a complete soil analysis to determine exact nutrient needs.**

Healthy turf must have healthy soil. Determine nutrient (nitrogen, phosphorous, and potassium) and pH levels. ASA will apply only nutrients that are necessary at times when they can be used most efficiently by the roots.

#### **Use slow-release organic fertilizer.**

Studies have shown that regular applications of compost based organic fertilizers have been proven to significantly suppress the growth of most common turf weeds. Nutrients released slowly into the soil maintain a more consistent level. ASA will apply less fertilizer more often to maintain a more consistent level and reduce the potential for leaching and runoff by allowing the turf to utilize the nutrients. Organic fertilizer adds organic matter to the soil that is utilized by the soil microorganisms.



Late August/ early September is considered to be a critical time for coolseason grasses. At this time the nitrogen can help the turf recover from summer stress and pest damage. Early spring applications are used to promote greenup. Often late spring applications are done to promote growth before the heat and drought stress of summer can impact the turf. It is important that the type of fertilizer used at this time contain high amounts of slow release nitrogen (WIN). Late Fall applications can be done after the last mowing (when turf has stopped growing), but just before the turf loses color. Not only does this timing enhance Winter turf color but it also can cause a Spring greenup three to four weeks earlier. Kentucky Bluegrass specifically benefits from this late season application by improved rooting the following Spring. When fertilizing it is important to remember that nutrient uptake is through the roots of the turf. The goal is to feed the soil, not the grass. Fertilizing turf will be avoided when wet because the fertilizer stays on the grass blade and can cause "fertilizer burn". Any fertilizer application will be followed with watering. This washes off the blade and forces the fertilizer material closer to the soil surface for absorption. Quickly available sources will not be applied before a heavy rainfall.

### **Liming**

The pH (acidity) of the soil affects the availability of other nutrients. Phosphorous is most available when the soil pH is nearly neutral between 6.0 and 7.0. In highly acidic soils with pH of less than 5.0, phosphorous gets "tied up" with iron and aluminum to form complexes which are unavailable to turfgrasses. Maintaining near neutral soil pH values also favors the activity of beneficial soil microorganisms, the release of nitrate from nitrogen fertilizers and more vigorous growth of most turfgrasses. In highly acidic soils, toxic concentrations of aluminum, iron and manganese may develop and cause impaired rooting (roots will appear short, brown and spindly) a decrease in overall turf vigor, shoot growth, drought tolerance and recuperative potential. The optimum pH range for cool-season turfgrass is 6.0 to 6.5. Since most soils in New England are acidic, the application of lime will adjust the soil pH or acidity to the correct level. Lime is a calcium-based compound (ground limestone). Some turf grass diseases tend to increase with pH extremes. Two ways to ensure that correct amounts of lime are applied to the athletic field are to: ; conduct a soil test prior to the liming application and use the amounts recommended by the soil lab, ; ensure that the spreader is properly calibrated for the specific application rate. The best time to apply lime is in the late Summer or early Fall. Late Fall applications will be avoided because they are known to increase some turf diseases such as pink snow mold.

### **Mowing.**

There is a direct relationship between mowing height and the depth of the root system. Removal of more than 40% of the height of the blade in a single mowing stops root growth. The larger percentage of the blade is removed, the longer the root growth is halted, allowing the turfgrass to be more susceptible to disease and insect problems and the encroachment of weeds. Mow more often, cutting less. Mowing heights will be higher in warmer months. Higher blade heights, two to three inches, shade the soil, conserve moisture and inhibit the development of weeds.



### **Leave clippings on the ground.**

Turf clippings are 85-90% water. As clippings decompose, nitrogen and other nutrients are returned to the soil, contributing to the organic matter. Shorter grass clippings will decompose faster. Leaving grass clippings can reduce the need for fertilizer by 1-3 applications per year. If mowed regularly at the proper height, there will be no build-up of thatch.

### **Aeration**

Compacted soil creates conditions for limited root development and increases the turf's susceptibility to certain diseases. Athletic fields can become extremely compacted. To prevent this, fields will be aerated several times a year. This increases the ability of water to penetrate the soil, provides oxygen to microorganisms, and pushes the thatch layer into the soil, increasing the rate of decomposition and the organic matter in the soil. After aeration, a compost based organic amendment will be applied to further increase the amount of organic matter and provide nutrients to the soil. Composted organic amendments have been found to be among the most consistently effective in reducing the severity of turfgrass diseases, whether applied as a topdressing, or root zone amendment.

### **Control thatch layer.**

Thatch is the accumulation of undecomposed roots and stems at the soil surface. If allowed to become too thick, this can prevent water and nutrients from entering the soil. Aeration pushes thatch into the soil, allowing for increased decomposition and increasing organic matter to the soil. Frequent mowing prevents build-up of thatch to unacceptable levels. The use of organic fertilizers also promotes thatch decomposition.

### **Irrigation**

Proper irrigation and water management practices are crucial to healthy turf and will reduce the potential for leaching and runoff. Soil moisture levels will be tested and water will be applied only to replace water lost through evapotranspiration. Irrigation applications need to be adjusted according to weather and soil conditions. Soil moisture will be monitored and used to determine the need for irrigation.

In general turf grasses need an inch of water per week during the growing season. More water will be required in the hot mid-summer months. The irrigation system shall be utilized to ensure when rainfall is not enough that enough water is provided to the field. The general rule of thumb is to irrigate heavily, but slowly once a week.

Watering will take place early in the morning, for better soil penetration and absorption by reducing excessive evaporation loss.

### **Field Rotation**

Field Rotation reduces compaction due to overuse and wear. Different fields will be used for practice by alternating team schedules. The field layouts have been designed to allow



for shifting the entire playing surface, which will reduce repetitive wear on the turf in places such as goal areas. An athletic field with a dense coverage of turf is an effective tool to reduce erosion and runoff.

### **Integrated Pest Management**

The fields will be checked on a regular basis for pests. This periodic monitoring will help to identify a potential problem in the early stages thereby avoiding crisis management methods at later stages. Crisis management can be costly, both financially and environmentally because it may require a more toxic material to be used. However, early detection often allows the turf manager to use alternative approaches and to use localized spot treatments which reduces pesticide use and costs. A written record of observations will be kept.

The simple presence of a pest does not mean a treatment has to be done. There may be a certain level of damage that is tolerable and not worth using a pesticide to control. The level at which pests will be controlled is referred to as a threshold, or the level of pest tolerance. To determine what level requires a response it is necessary to know what is the expected quality of the turf. The higher the desired turf quality, the quicker a turf manager will need to respond and this may mean using a pesticide.

If pests are noticed during routine checks a professional will be consulted for recommendations on next steps. ASA will look to leverage mechanical or biological controls for pest control to the greatest extent possible. Chemical controls will be a last resort and will be applied by a professional.



## **TURF MANAGEMENT SCHEDULE**

<b>Early Spring (mid-March/April)</b>	<b>BMP(s) and Details</b>	<b>Sensitive Resources</b>
General	Rake away areas of dead grass Reseed thin and bare areas	
Water	Check Irrigation equipment and zones	
Nutrient		
Pest & Pesticides	Scouting / Monitoring	Allows early detection of pest
Other	Update management practices	

<b>Spring (May)</b>	<b>BMP(s) and Details</b>	<b>Sensitive Resources</b>
General	Mowing High Aeration of compacted areas	Water Conservation Weed control Player safety (fall & injury)
Water	Check Irrigation equipment and zones Water as necessary	Water Conservation (ensures only field, not any paved areas receive water) Ensures even distribution of water and better turf growth and resulting even playing surface.
Nutrient	Use Fertilizer with high WIN % Fertilize only field areas Soil Test	Non-players, or visitors safe from chemical sensitivity. Ensures proper type & amt of material is applied & avoids unnecessary reapplication or corrective action.
Pest & Pesticides	Scouting / Monitoring	Allows early detection of pest
Other	Keep records up to date	



<b>Summer(June/July/August)</b>	<b>BMP(s) and Details</b>	<b>Sensitive Resources</b>
General	Mowing High (avoid semi-dormant and dormant turf)	Water Conservation Weed control Player safety (fall & injury)
Water	Water deeply and infrequently	Water Conservation (ensures only field, not any paved areas receive water) Ensures even distribution of water and better turf growth and resulting even playing surface.
Nutrient		
Pest & Pesticides	Scouting / Monitoring	Allows early detection of pest
Other	Keep records up to date	

<b>Fall (September/October)</b>	<b>BMP(s) and Details</b>	<b>Sensitive Resources</b>
General	Mowing High (avoid semi-dormant and dormant turf) Renovate and reseed (if necessary)	Water Conservation Weed control Player safety (fall & injury)
Water	Water deeply and infrequently	Water Conservation (ensures only field, not any paved areas receive water) Ensures even distribution of water and better turf growth and resulting even playing surface.
Nutrient	Fertilize in early Fall Test pH & adjust accordingly	
Pest & Pesticides	Scouting / Monitoring	Allows early detection of pest
Other	Keep records up to date	



## **Sheet C-4 Irrigation Plan**

**CONSTRUCTION LOGISTICS AND  
SOIL MANAGEMENT PLAN**

**WOODSOM FARM SOCCER FIELDS  
LION'S MOUTH ROAD  
AMESBURY, MASSACHUSETTS**

Prepared for:

Amesbury Soccer Association  
P.O. Box 127  
Amesbury, Massachusetts

Prepared by:

**Oak Consulting Group, LLC**  
P.O. Box 1123  
Newburyport, Massachusetts 01950  
978-312-3120

Project 14028  
June 2, 2015

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### APPENDICES:

- Appendix A: Site Logistics Plan
- Appendix B: Earthwork Calculations

## 1.0 INTRODUCTION

On behalf of the Amesbury Soccer Association, (ASA), Oak Consulting Group, LLC (OCG) has prepared the following Construction Logistics and Soil Management Plan for constructing the proposed soccer fields at the Woodsom Farm property located on Lion's Mouth Road in Amesbury, Massachusetts.

### 1.1 Current Conditions

The project site (Lease Area) consists of an approximately 10.1-acre portion of the Woodsom Farm property under a lease agreement between the ASA and the City of Amesbury for construction of the proposed soccer fields. The Lease Area is currently occupied by maintained agricultural fields in passive recreational use except that approximately 2.2 acres of the site have been improved and are maintained as athletic playing fields.

There are freshwater bordering vegetated wetlands (BVW) located to the northeast and southwest of the Lease Area. These resource areas are all located outside the Lease Area; however the associated 100-foot buffer zones extend into the eastern end of the project site. The BVW resource area to the southwest contains a small (approximately 0.5 acres) pond. Additionally, approximately 3.6 acres in the northwest portion of the Lease Area is located within the City of Amesbury Zone C Water Resources Protection District.

Site topography provides gentle slopes in various directions with localized high and low spots. All stormwater flows overland across the vegetated surfaces to the adjacent BVW areas. There are no impervious surfaces or stormwater Best Management Practices (BMPs) within the Lease Area or surrounding land receiving runoff from the project site.

### 1.2 Site Geology and Hydrogeology

Test pits excavated within the Lease Area indicate that site soils are comprised of fine sandy loam topsoil and fine sandy loams subsoils with many bits of weathered rock fragments. The soils are well drained in most locations except that rock fragments were observed to be tightly-packed in some locations which may restrict percolation rates. Indicators of Estimated Seasonal High Ground Water (ESHGW) were encountered in certain test pits excavated at lower elevations in the southern and eastern portions of the Lease Area. Depths to ESHGW in test pits within the Lease Area varied between 33 to 50 inches. For most of the test pits excavated within the Lease Area, evidence of ESHGW was not reported above the typical excavation depth of 48 inches. Ledge was encountered approximately 12 inches below ground surface at a knoll/high point in the northern portion of the site (Test Pit 6B) and at 32 and 37 inches below ground surface at nearby Test Pits 7E and 5E, respectively. The ledge encountered was described as loose and easily fractured shale.

According to the U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) Soil Map for Essex County, soils within the Lease Area are classified as Charlton fine sandy loam. Based on the soil information provided by the test pits and NRCS, site soils are identified as hydrologic soil group A.

### 1.3 Proposed Improvements

The Project consists of constructing soccer fields within the lease area. Additional improvements include an irrigation system and stone dust paths to provide access to the fields. No

impervious surfaces, parking areas, buildings, or other site improvements are proposed beyond the fields themselves and supporting infrastructure.

The general layout of the fields are sized in accordance with U.S. Youth Soccer recommendations for various age groups as shown on the project site plans. However, it will be necessary to "rest" portions of the fields during certain seasons so the layout has been designed to accommodate alternative configurations which will likely include rotating the field orientation by 90 degrees. As such, the design proposes three general field areas designated as Areas A, B and C on the project plans.

As shown on the plans, field construction will include installation of underdrains to promote proper drainage of the playing surfaces. An irrigation system is also proposed which will connect to a new water supply well to be installed at the site. The proper field drainage and irrigation system will help increase the durability of the fields and ease long term maintenance burdens.

## 2.0 CONSTRUCTION SEQUENCING AND LOGISTICS

### 2.1 Sequence of Operations

The fields will be constructed in phases as described below. The intent is to begin work at the lowest and farthest end of the project and proceed back toward the parking lot.

Phase 1:	Field Area "B", Stormwater Basin 1C, Irrigation well
Phase 2:	Field Area "C"
Phase 3:	Field Area "A" (north)
Phase 4:	Field Area "A" (south)

Proposed phase areas are shown on the Site Logistics Plan enclosed as Appendix A. For each phase of the work the general sequence of construction activities will be as follows:

- Install erosion control measures: All sedimentation barriers shown on the project plans as required to protect nearby wetlands resource areas will be installed prior to the start of work. Prior to the start of each phase, sedimentation barriers will be inspected and maintained as required to confirm that they are adequately protective for the proposed work. In addition, supplemental measures may be installed during Phases 2, 3 or 4 to protect earlier phases from sedimentation impacts.
- Strip top soil: Based on site soil data, existing topsoil will be stripped to a depth of approximately 12 inches below finish grade. Approximately 30% of the stripped topsoil will be stockpiled on site for reuse. The remaining 70% will be exported off site.
- Construct fields to subgrade: The site will be graded to establish the required subgrade beneath the select materials which comprise the fields. Additional fill will be required in certain areas of the site.
- Install base courses: Select gravel and root mix materials will be imported and installed according to the plans. Drainage and irrigation piping will also be installed at this time.
- Install top soil and seed: Stockpiled topsoil will be applied and seeded with athletic field mix. Stone dust paths will also be installed at this time.
- Maintain until turf is established: Seed will be irrigated and maintained until turf is established. This process will include repairing areas of erosion if necessary.

Phases may be overlapping. It is not anticipated that turf will be fully established on Phases 1 or 2 before starting work on a subsequent phases. However, both Phases 1 and 2 will be complete up to installing the topsoil and seed prior to beginning work on Phases 3 and 4. All erosion controls shall remain in place and maintained until the contributing gradient area is stabilized. The irrigation well is proposed to be installed during Phase 1 to provide a water supply during construction.

### 2.2 Soil Management

As indicated in the earthwork calculations enclosed as Appendix B, the project will require removing an estimated 15,400 cubic yards (cy) of topsoil. Of that amount, an estimated total of 4,400 cy

will be stockpiled on site for reuse. The remaining topsoil will be removed from the site. Estimated soil stockpile volumes for each of the construction phases is summarized below.

	Approximate Area (sf)	Topsoil Stockpile Volume (cy)
Phase 1	153,700	1,600
Phase 2	64,380	700
Phase 3	107,000	1,100
Phase 4	90,200	1,000
Total	415,280	4,400

As shown on the Construction Logistics Plan (Appendix A), soil stockpiles for Phases 1 and 2 will be located within the lease area on the Phase 3 field area. Conservatively, we estimate that the largest amount that would potentially be stockpiled at this location is 2,300 cy, the sum of the estimated topsoil volumes for both Phases 1 and 2. The proposed stockpile could occupy a base area of as much as 18,000 square feet.

For Phase 3, a stockpile of up to 1,100 cy is anticipated. A stockpile location occupying approximately 9,000 is shown on the Construction Logistics Plan within the lease area on the Phase 4 field area.

For Phase 4, a stockpile of up to 1,000 cy is anticipated. A stockpile location occupying approximately 8,000 is shown on the Construction Logistics Plan in the area between the Lease Area and the gravel parking area.

All proposed soil stockpiles are located outside of wetland resource area buffer zones. Possible sediment migration resulting from stockpile erosion is expected to be minimal since the stockpiles will be located in grassed areas. However, sedimentation barriers will be installed and maintained around the base of the stockpiles if the need arises.

Select materials being imported to the site will be delivered in coordination with the construction schedule. Trucks will pile select materials at various locations within the active work areas in the general proximity of the final placement location. Little if any stockpiling of imported select materials is anticipated.

### 2.3 Construction Staging

Construction staging activities may include the following:

- Field office;
- Materials laydown area (drainage piping, irrigation equipment, etc.);
- Construction equipment parking; and
- Parking for worker vehicles.

The field office and laydown areas will be located in the grassed area between the existing gravel parking and the Lease Area as shown on the Construction Logistics Plan. Construction equipment such as excavators and graders may be parked overnight either on gravel parking area or within the work area.

Workers will park their personal vehicles either in the gravel parking lot or adjacent to the field office and laydown area.

## **APPENDIX A**

### **Site Logistics Plan**

Construction Logistics and Soil Management Plan  
Woodsom Farm Soccer Fields  
Lions Mouth Road  
Amesbury, Massachusetts



## **APPENDIX B**

### **Earthwork Calculations**

Construction Logistics and Soil Management Plan  
Woodsom Farm Soccer Fields  
Lions Mouth Road  
Amesbury, Massachusetts

**CONSTRUCTION LOGISTICS AND  
SOIL MANAGEMENT PLAN**

**WOODSOM FARM SOCCER FIELDS  
LION'S MOUTH ROAD  
AMESBURY, MASSACHUSETTS**

Prepared for:

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Amesbury, Massachusetts

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Project 14028  
August 3, 2015

*P.B. NJ, Scan, A/C*

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### APPENDICES:

- Appendix A: Site Logistics Plan
- Appendix B: Earthwork Calculations

## 1.0 INTRODUCTION

On behalf of the Amesbury Soccer Association, (ASA), Oak Consulting Group, LLC (OCG) has prepared the following Construction Logistics and Soil Management Plan for constructing the proposed soccer fields at the Woodsom Farm property located on Lion's Mouth Road in Amesbury, Massachusetts.

### 1.1 Current Conditions

The project site (Lease Area) consists of an approximately 10.1-acre portion of the Woodsom Farm property under a lease agreement between the ASA and the City of Amesbury for construction of the proposed soccer fields. The Lease Area is currently occupied by maintained agricultural fields in passive recreational use except that approximately 2.2 acres of the site have been improved and are maintained as athletic playing fields.

There are freshwater bordering vegetated wetlands (BVW) located to the northeast and southwest of the Lease Area. These resource areas are all located outside the Lease Area; however the associated 100-foot buffer zones extend into the eastern end of the project site. The BVW resource area to the southwest contains a small (approximately 0.5 acres) pond. Additionally, approximately 3.6 acres in the northwest portion of the Lease Area is located within the City of Amesbury Zone C Water Resources Protection District.

Site topography provides gentle slopes in various directions with localized high and low spots. All stormwater flows overland across the vegetated surfaces to the adjacent BVW areas. There are no impervious surfaces or stormwater Best Management Practices (BMPs) within the Lease Area or surrounding land receiving runoff from the project site.

### 1.2 Site Geology and Hydrogeology

Test pits excavated within the Lease Area indicate that site soils are comprised of fine sandy loam topsoil and fine sandy loams subsoils with many bits of weathered rock fragments. The soils are well drained in most locations except that rock fragments were observed to be tightly-packed in some locations which may restrict percolation rates. Indicators of Estimated Seasonal High Ground Water (ESHGW) were encountered in certain test pits excavated at lower elevations in the southern and eastern portions of the Lease Area. Depths to ESHGW in test pits within the Lease Area varied between 33 to 50 inches. For most of the test pits excavated within the Lease Area, evidence of ESHGW was not reported above the typical excavation depth of 48 inches. Ledge was encountered approximately 12 inches below ground surface at a knoll/high point in the northern portion of the site (Test Pit 6B) and at 32 and 37 inches below ground surface at nearby Test Pits 7E and 5E, respectively. The ledge encountered was described as loose and easily fractured shale.

According to the U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) Soil Map for Essex County, soils within the Lease Area are classified as Charlton fine sandy loam. Based on the soil information provided by the test pits and NRCS, site soils are identified as hydrologic soil group A.

### 1.3 Proposed Improvements

The Project consists of constructing soccer fields within the lease area. Additional improvements include an irrigation system and stone dust paths to provide access to the fields. No

impervious surfaces, parking areas, buildings, or other site improvements are proposed beyond the fields themselves and supporting infrastructure.

The general layout of the fields are sized in accordance with U.S. Youth Soccer recommendations for various age groups as shown on the project site plans. However, it will be necessary to "rest" portions of the fields during certain seasons so the layout has been designed to accommodate alternative configurations which will likely include rotating the field orientation by 90 degrees. As such, the design proposes three general field areas designated as Areas A, B and C on the project plans.

As shown on the plans, field construction will include installation of underdrains to promote proper drainage of the playing surfaces. An irrigation system is also proposed which will connect to a new water supply well to be installed at the site. The proper field drainage and irrigation system will help increase the durability of the fields and ease long term maintenance burdens.

## 2.0 CONSTRUCTION SEQUENCING AND LOGISTICS

### 2.1 Sequence of Operations

The fields will be constructed in phases as described below. The intent is to begin work at the lowest and farthest end of the project and proceed back toward the parking lot.

Phase 1:	Field Area "B", Stormwater Basin 1C, Irrigation well
Phase 2:	Field Area "C"
Phase 3:	Field Area "A" (north)
Phase 4:	Field Area "A" (south)

Proposed phase areas are shown on the Site Logistics Plan enclosed as Appendix A. For each phase of the work the general sequence of construction activities will be as follows:

- Install erosion control measures: All sedimentation barriers shown on the project plans as required to protect nearby wetlands resource areas will be installed prior to the start of work. Prior to the start of each phase, sedimentation barriers will be inspected and maintained as required to confirm that they are adequately protective for the proposed work. In addition, supplemental measures may be installed during Phases 2, 3 or 4 to protect earlier phases from sedimentation impacts.
- Strip top soil: Based on site soil data, existing topsoil will be stripped to a depth of approximately 12 inches below finish grade. Approximately 30% of the stripped topsoil will be stockpiled on site for reuse. The remaining 70% will be exported off site.
- Construct fields to subgrade: The site will be graded to establish the required subgrade beneath the select materials which comprise the fields. Additional fill will be required in certain areas of the site.
- Install base courses: Select gravel and root mix materials will be imported and installed according to the plans. Drainage and irrigation piping will also be installed at this time.
- Install top soil and seed: Stockpiled topsoil will be applied and seeded with athletic field mix. Stone dust paths will also be installed at this time.
- Maintain until turf is established: Seed will be irrigated and maintained until turf is established. This process will include repairing areas of erosion if necessary.

Phases may be overlapping. It is not anticipated that turf will be fully established on Phases 1 or 2 before starting work on a subsequent phases. However, both Phases 1 and 2 will be complete up to installing the topsoil and seed prior to beginning work on Phases 3 and 4. All erosion controls shall remain in place and maintained until the contributing gradient area is stabilized. The irrigation well is proposed to be installed during Phase 1 to provide a water supply during construction.

## 2.2 Soil Management

As indicated in the earthwork calculations enclosed as Appendix B, the project will require removing an estimated 15,400 cubic yards (cy) of topsoil. Of that amount, an estimated total of 4,400 cy will be stockpiled on site for reuse. The remaining topsoil will be removed from the site. Estimated soil stockpile volumes for each of the construction phases is summarized below.

	Approximate Area (sf)	Topsoil Stockpile Volume (cy)
Phase 1	153,700	1,600
Phase 2	64,380	700
Phase 3	107,000	1,100
Phase 4	90,200	1,000
Total	415,280	4,400

As shown on the Construction Logistics Plan (Appendix A), soil stockpiles for Phases 1 and 2 will be located within the lease area on the Phase 3 field area. Conservatively, we estimate that the largest amount that would potentially be stockpiled at this location is 2,300 cy, the sum of the estimated topsoil volumes for both Phases 1 and 2. The proposed stockpile could occupy a base area of as much as 18,000 square feet.

For Phase 3, a stockpile of up to 1,100 cy is anticipated. A stockpile location occupying approximately 9,000 is shown on the Construction Logistics Plan within the lease area on the Phase 4 field area.

For Phase 4, a stockpile of up to 1,000 cy is anticipated. A stockpile location occupying approximately 8,000 is shown on the Construction Logistics Plan in the area between the Lease Area and the gravel parking area.

All proposed soil stockpiles are located outside of wetland resource area buffer zones. Possible sediment migration resulting from stockpile erosion is expected to be minimal since the stockpiles will be located in grassed areas. However, sedimentation barriers will be installed and maintained around the base of the stockpiles if the need arises.

Select materials being imported to the site will be delivered in coordination with the construction schedule. Trucks will pile select materials at various locations within the active work areas in the general proximity of the final placement location. Little if any stockpiling of imported select materials is anticipated.

Surplus topsoil will be exported and disposed offsite. Similarly, select materials will be imported to the site from suitable sources. The export disposal site(s) and import source site(s) will be identified by prospective contractors during the bidding phase of the project. Material export and import will be performed by trucks using local roadways. The specific routes will be dependent upon the truck origin and destination and will be with adherence to local regulations. Estimated total volumes of soil import/export summarized below.

<b>Material</b>	<b>Export (cy)</b>	<b>Import (cy)</b>
Topsoil	11,000	--
Common Fill	--	15,000
Select Materials	--	13,400
<b>Totals</b>	<b>11,000</b>	<b>28,400</b>

### 2.3 Construction Staging

Construction staging activities may include the following:

- Field office;
- Materials laydown area (drainage piping, irrigation equipment, etc.);
- Construction equipment parking; and
- Parking for worker vehicles.

The field office and laydown areas will be located in the grassed area between the existing gravel parking and the Lease Area as shown on the Construction Logistics Plan. Construction equipment such as excavators and graders may be parked overnight either on gravel parking area or within the work area. Workers will park their personal vehicles either in the gravel parking lot or adjacent to the field office and laydown area. These construction staging activities will be coordinated to minimize impacts and avoid interference with other site activities as well as abutting property owners.

### 3.0 POLLUTION PREVENTION

The project will disturb more than one acre. Accordingly, construction activities will be subject to permitting in accordance with the National Pollution Discharge Elimination System (NPDES) Construction General Permit. This permit will require preparing a comprehensive Stormwater Pollution Prevention Plan (SWPPP) in accordance with federal standards. The SWPPP will be prepared by the site contractor in coordination with filing an NPDES Notice of Intent prior to the start of work.

In addition to the SWPPP, erosion control and other pollution prevention measures are identified on Sheet C-5 of the project plan as summarized in the sections below.

#### 3.1 Timing of Controls/Measures

Erosion and sediment barriers shall be installed prior to commencing any clearing or grading of the site. Structural controls shall be installed concurrently with the applicable activity. Areas where construction activity temporarily ceases for more than thirty (30) days will be stabilized with a temporary seed and mulch within fourteen (14) days of the last disturbance. Once construction activity ceases permanently in an area, silt fences and hay bale barriers and any earth/dikes will be removed once permanent measures are established.

The contractor shall be responsible inspecting erosion control measures on a daily basis preparing weekly report. All erosion control measures will be maintained in good working order. If a repair is necessary, it will be initiated within 24 hours of report.

#### 3.2 Stabilization

An area shall be considered stabilized when once one of the following has occurred:

- A minimum of 85% vegetative growth has been established;
- A minimum of 3" of non-erosive material such as stone or rip-rap has been installed; or
- Erosion control blankets have been properly installed.

Stabilization shall be initiated on all loam stockpiles and disturbed areas where construction activity will not occur for more than thirty (30) calendar days by the fourteenth (14th) day after construction activity has permanently or temporarily ceased in that area. All disturbed areas shall be stabilized within 60 days of initial disturbance. All cut and fill slopes and roadways shall be stabilized within 72 hours of achieving grade. Stabilization measures to be used include

- Temporary seeding;
- Mulching;
- Stone rip-rap; or
- Jute matting.

During construction, runoff will be diverted around the site with earth dikes, piping or stabilized channels where possible. Sheet runoff from the site will be filtered through hay bale barriers and/or silt fences.

### 3.3 Off-Site Vehicle Tracking

Stabilized construction entrances shall be installed at all egresses to the active work areas on the site and maintained for the duration of construction as shown on the site plans. A stabilized construction entrance detail is provided on Site Details Sheet C-6. The stabilized construction entrance shall be constructed with two (2) inches of stone or reclaimed or recycled concrete equivalent not less than six (6) inches thick, twelve (12) feet wide and 50 feet long.

The entrance shall be maintained in a condition which will prevent tracking of sediment onto public right-of-way. When washing is required, it shall be done on an area stabilized with aggregate which drains into an approved sediment trapping device.

### 3.4 Dust Control

The contractor shall be responsible to control dust throughout the construction period. Dust control methods shall include, but not limited to sprinkling water on exposed areas, covering loaded dump trucks leaving the site, and temporary mulching. Dust control measures shall be utilized to minimize potential migration of dust from the active site to abutting areas.

**APPENDIX A**

**Site Logistics Plan**

**Construction Logistics and Soil Management Plan  
Woodsom Farm Soccer Fields  
Lions Mouth Road  
Amesbury, Massachusetts**

**Oak Consulting Group, LLC  
Project 14028**



## **APPENDIX B**

### **Earthwork Calculations**

**Construction Logistics and Soil Management Plan  
Woodson Farm Soccer Fields  
Lions Mouth Road  
Amesbury, Massachusetts**

**Oak Consulting Group, LLC  
Project 14028**

**Memorandum**

**To:** Margaret McCarthy  
**From:** Paul Avery  
**cc:** Tom Hughes  
Ed Campbell  
  
**RE:** Earthwork Summary  
Woodsom Farm  
Lions Mouth Road

**Date:** February 6, 2015

As requested, OCG has prepared the following summary of estimated earthwork volume for the Woodsom Farm soccer field project based on the most recent plans dated January 13, 2015.

In summary, we anticipate the project will require the following:

Total Cut	8,200 cy
Total Fill	<u>25,600 cy</u>
Net Fill Required	17,400 cy
Topsoil Stripped	15,400 cy
Topsoil Reused	<u>4,400 cy</u>
Topsoil Exported	11,000 cy
Adjusted Fill Required (after topsoil export)	28,400 cy
Imported Common Fill	15,000 cy
Imported Select Field Fill Materials	
Root Mix	6,700 cy
Gravel Base	<u>6,700 cy</u>
Total Imported Fill	28,400 cy

This summary is based on the assumptions provided below. These assumptions should be reviewed with site contractor and may be subject to change prior to construction.

1. Based on the 1998 Soils Analysis provided, approximately 12" of topsoil will need to be stripped from the entire work area and stockpiled.
2. Two inches of stockpiled topsoil will be reused for seeding the athletic field playing surfaces as shown on the Playing Field Cross Section detail on Sheet C-6.
3. Six inches of stockpiled topsoil will be reused on other disturbed areas of the site within the limit of work but beyond the playing field buffer lines.
4. Select field materials quantities are based on the field areas and their buffers receiving 8" of root mix and 8" of gravel as called for on the Playing Field Cross Section detail. Quantities are subject to change with final field construction details.

The total volume of stripped topsoil is estimated to be approximately 15,400 cy of which approximately 4,400 is anticipated to be reused on site. The remaining 11,000 cy to be exported is expected to be quality organic material with potential resale value. We recommend this potential be further explored with the site contractor.

Fill requirements may be reduced by lowering proposed field grades. By rough estimate, a balanced site would require lowering the fields on the order of one foot, on average. Regrading opportunities may be constrained by site factors such as shallow depths to ledge in certain locations or drainage considerations in areas near wetlands.